WEST Search History

DATE: Monday, September 09, 2002

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB; PLUR=YES; OP=ADJ		
L12	L11 and l10	2	L12
L11	l5 and l9	95	L11
L10	l1 and l3 and l9	27	L10
L9	(non$1reactive or reactive) same dyes	8588	L9
L8	l1 and l2 and l3 and l4	1	L8
L7	l1 and l3 and l4 and l5	1	L7
L6	l2 and l3 and l4 and l5	1	L6
L5	water same swellable same polymer	3869	L5
L4	indicator same (non$1reactive or reactive) same dyes	170	L4
L3	(web or sheet) same (fibers or fibres)	62698	L3
L2	wipers	28492	L2
L1	absorbent same article	5376	L1

END OF SEARCH HISTORY

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=> FILE CAPLUS
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY     SESSION
FULL ESTIMATED COST                                         0.21        0.21

FILE 'CAPLUS' ENTERED AT 13:35:51 ON 09 SEP 2002
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FILE COVERS 1907 - 9 Sep 2002  VOL 137 ISS 11
FILE LAST UPDATED: 8 Sep 2002  (20020908/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> S absorbent (1)article
         29459 ABSORBENT
         15197 ABSORBENTS
         35349 ABSORBENT
                 (ABSORBENT OR ABSORBENTS)
         72261 ARTICLE
         62391 ARTICLES
        123914 ARTICLE
                 (ARTICLE OR ARTICLES)
L1        1261 ABSORBENT (L)ARTICLE

=> s indicator (1)system
        110389 INDICATOR
         49302 INDICATORS
        144569 INDICATOR
                 (INDICATOR OR INDICATORS)
       1767295 SYSTEM
        963556 SYSTEMS
       2388708 SYSTEM
                 (SYSTEM OR SYSTEMS)
L2       12106 INDICATOR (L)SYSTEM

=> s (non-reactive or nonreactive) (1) reactive(1) dye
        552487 NON
            30 NONS
        552511 NON
                 (NON OR NONS)
        217925 REACTIVE
           122 REACTIVES
        218008 REACTIVE
                 (REACTIVE OR REACTIVES)
          1842 NON-REACTIVE
```

```
                (NON(W)REACTIVE)
          5379 NONREACTIVE
             4 NONREACTIVES
          5382 NONREACTIVE
                (NONREACTIVE OR NONREACTIVES)
        217925 REACTIVE
           122 REACTIVES
        218008 REACTIVE
                (REACTIVE OR REACTIVES)
        218623 DYE
        175151 DYES
        285143 DYE
                (DYE OR DYES)
L3          90 (NON-REACTIVE OR NONREACTIVE) (L) REACTIVE(L) DYE

=> s water (1)swellable(1)polymer
       1941211 WATER
        212547 WATERS
       1991868 WATER
                (WATER OR WATERS)
          3939 SWELLABLE
        832810 POLYMER
        681219 POLYMERS
       1130100 POLYMER
                (POLYMER OR POLYMERS)
L4         1134 WATER (L)SWELLABLE(L)POLYMER

=> s antimicrobial
         43284 ANTIMICROBIAL
          2896 ANTIMICROBIALS
L5        44259 ANTIMICROBIAL
                (ANTIMICROBIAL OR ANTIMICROBIALS)

=> d his

     (FILE 'HOME' ENTERED AT 13:35:24 ON 09 SEP 2002)

     FILE 'CAPLUS' ENTERED AT 13:35:51 ON 09 SEP 2002
L1          1261 S ABSORBENT (L)ARTICLE
L2         12106 S INDICATOR (L)SYSTEM
L3            90 S (NON-REACTIVE OR NONREACTIVE) (L) REACTIVE(L) DYE
L4          1134 S WATER (L)SWELLABLE(L)POLYMER
L5         44259 S ANTIMICROBIAL

=> s l1 and l2 and l4 and l5
L6             0 L1 AND L2 AND L4 AND L5

=> s wipes or wipers
            600 WIPES
            341 WIPERS
L7          933 WIPES OR WIPERS

=> s l2 and l4 and l5 and l7
L8             0 L2 AND L4 AND L5 AND L7

=> s l1 and l3 and l4 and l5
L9             0 L1 AND L3 AND L4 AND L5

=> s l1 and l4 and l5
L10            0 L1 AND L4 AND L5

=> s l1 and l4
L11           14 L1 AND L4
```

```
=> s l11 and l5
L12           0 L11 AND L5

=> s (anti-microbial or antimicrobial)
         280060 ANTI
              7 ANTIS
         280066 ANTI
                (ANTI OR ANTIS)
         246193 MICROBIAL
             92 MICROBIALS
         246256 MICROBIAL
                (MICROBIAL OR MICROBIALS)
            609 ANTI-MICROBIAL
                (ANTI(W)MICROBIAL)
          43284 ANTIMICROBIAL
           2896 ANTIMICROBIALS
          44259 ANTIMICROBIAL
                (ANTIMICROBIAL OR ANTIMICROBIALS)
L13       44596 (ANTI-MICROBIAL OR ANTIMICROBIAL)

=> d his

     (FILE 'HOME' ENTERED AT 13:35:24 ON 09 SEP 2002)

     FILE 'CAPLUS' ENTERED AT 13:35:51 ON 09 SEP 2002
L1          1261 S ABSORBENT (L)ARTICLE
L2         12106 S INDICATOR (L)SYSTEM
L3            90 S (NON-REACTIVE OR NONREACTIVE) (L) REACTIVE(L) DYE
L4          1134 S WATER (L)SWELLABLE(L)POLYMER
L5         44259 S ANTIMICROBIAL
L6             0 S L1 AND L2 AND L4 AND L5
L7           933 S WIPES OR WIPERS
L8             0 S L2 AND L4 AND L5 AND L7
L9             0 S L1 AND L3 AND L4 AND L5
L10            0 S L1 AND L4 AND L5
L11           14 S L1 AND L4
L12            0 S L11 AND L5
L13        44596 S (ANTI-MICROBIAL OR ANTIMICROBIAL)

=> s l7 and l13
L14           68 L7 AND L13

=> s l13 and l3 and l7
L15           0 L13 AND L3 AND L7

=> s l13 and l1 and l4
L16           0 L13 AND L1 AND L4

=> s l1 and l3 and l4
L17           0 L1 AND L3 AND L4

=> s l1 and l2
L18           2 L1 AND L2

=> d l18 1-2 bib,abs

L18  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2002 ACS
AN   2001:489190  CAPLUS
DN   135:78019
TI   Use-dependent indicator system for absorbent
     articles
IN   Anderson, Ralph L.; Clark, James W.
PA   Kimberly-Clark Worldwide, Inc., USA
SO   PCT Int. Appl., 37 pp.
```

CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001047403	A1	20010705	WO 2000-US34932	20001222
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2001031595	A1	20011018	US 2000-746719	20001222
PRAI US 1999-173344P	P	19991228		
US 2000-746719	A	20001222		

AB The compns. of a use-dependent **indicator system** for detecting the exhaustion of an active chem. within an **absorbent article** and forming methods of the **absorbent articles** are provided. The **indicator system** includes .gtoreq.1 dye component and a polymer mixt. The dye component(s) can be nonreactive and/or reactive dyes. The polymer mixt. can contain a polymer, such as a latex adhesive, to facilitate control over the dissoln. rate of the dye component(s). By controlling the dissoln. rate of the dye component(s), an **indicator system** of the present invention can impart a change in color to signal the exhaustion of an active chem. incorporated within the **absorbent article**, such as an anti-microbial agent.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
AN 1967:418519 CAPLUS
DN 67:18519
TI Test article for the detection of glucose
IN Mast, Raymond L.
PA Miles Laboratories, Inc.
SO U.S., 3 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3298789		19670117	US	19641214

AB The title products prepd. from an **absorbent** material impregnated with an enzyme **system** with glucose oxidase activity, a substance with peroxidative activity, poly(vinylpyrrolidinone) (I), an interpolymer of Me vinyl ether and maleic anhydride, a buffer **system**, and an **indicator** mixt. showed sharp color distinctions between different blood glucose levels. Thus, 11.67 g. of Gantrez AN139, a Me vinyl ether-maleic anhydride interpolymer, was dissolved in 233 ml. water at 100.degree. and the cooled soln. was dild. to 233 ml. with water. This mixt. was combined with an **indicator** soln. contg. 200 ml. of 95% EtOH, 0.83 g. 2,7-diaminofluorene-2HCl, 1.66 g. o-tolidine-2HCl, 2.83 g. benzidine-2HCl and 133 ml. water and with a buffer soln. (pH 7) contg. 48.4 g. Tris, 20 g. malonic acid, 34.5 g. di-Na malonate, and 140 ml. water. A I soln. (30 g. in 233 ml. water) and an enzyme soln. contg. 0.533 g. horseradish peroxidase, 33 ml. water, and 68 ml. of liquid glucose oxidase (activity .apprx.1000 glucose oxidase units/ml.) were added to the above mixt. and a filter paper base was impregnated with the

resulting liquid blend. After 10 min. at 87.degree., the impregnated paper was coated with a 1.25 wt.% soln. of Et cellulose in C6H6 and dried at 87.degree. for 8 min. to give a glucose test **article**.

=> d his

(FILE 'HOME' ENTERED AT 13:35:24 ON 09 SEP 2002)

FILE 'CAPLUS' ENTERED AT 13:35:51 ON 09 SEP 2002

```
L1          1261 S ABSORBENT (L)ARTICLE
L2         12106 S INDICATOR (L)SYSTEM
L3            90 S (NON-REACTIVE OR NONREACTIVE) (L) REACTIVE(L) DYE
L4          1134 S WATER (L)SWELLABLE(L)POLYMER
L5         44259 S ANTIMICROBIAL
L6             0 S L1 AND L2 AND L4 AND L5
L7           933 S WIPES OR WIPERS
L8             0 S L2 AND L4 AND L5 AND L7
L9             0 S L1 AND L3 AND L4 AND L5
L10            0 S L1 AND L4 AND L5
L11           14 S L1 AND L4
L12            0 S L11 AND L5
L13        44596 S (ANTI-MICROBIAL OR ANTIMICROBIAL)
L14           68 S L7 AND L13
L15            0 S L13 AND L3 AND L7
L16            0 S L13 AND L1 AND L4
L17            0 S L1 AND L3 AND L4
L18            2 S L1 AND L2
```

=> d l11 1-14 bib,abs

L11 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 2001:472537 CAPLUS
DN 135:66288
TI High permeability, low absorption capacity polymers for personal-care articles
IN Weir, Joseph L.; Buchholz, Fredric L.; Christensen, Stephen B.; Graham, Andrew T.
PA Dow Chemical Company, USA
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001045758	A1	20010628	WO 2000-US35082	20001221

PI W: CN, JP, KR, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

PRAI US 1999-173016P P 19991223

AB An improved process is described for the prepn. of superabsorbent **polymers** having high gel bed permeability and low absorption capacity, and the **polymers** prepd. by the process. More specifically, the process is a process for the prepn. of **water-swellable**, **water**-insol. **polymer** particles having high gel bed permeability and low absorption capacity, the process comprising crosslinking the **polymer** using at least 2 covalent crosslinking agents under conditions such that there is formed a **polymer** which is substantially uniformly crosslinked and which has a gel bed permeability of at least 5 x 10-9 cm2 and an absorption capacity of less than 26 g/g. The present invention includes articles contg. the high permeability and low absorption capacity **polymer**. Thus, a **polymer** gel was prepd. from ethoxylated trimethylolpropane

triacrylate (Sartomer-9035) and acrylic acid and crosslinked with glycerol. The gel bed permeability was 7 X 10-9 cm2.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1998:779823 CAPLUS
DN 130:52825
TI **Water-swellable**, hydrophilic **polymer** compositions
IN Engelhardt, Fritz; Funk, Rudiger; Herfert, Norbert; Weismantel, Matthias
PA Clariant G.m.b.H., Germany
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 881238	A2	19981202	EP 1998-109075	19980519
	EP 881238	A3	19990407		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19722340	A1	19981203	DE 1997-19722340	19970528
	US 6107432	A	20000822	US 1998-84941	19980526
	CA 2238788	AA	19981128	CA 1998-2238788	19980527
	JP 10330433	A2	19981215	JP 1998-146189	19980527
PRAI	DE 1997-19722340	A	19970528		

AB The title compns., useful as **absorbents** for water and in hygienic **articles**, are prepd. by polymg. hydrophilic monomers in the presence of starch (optionally, chem.-modified) and radical initiators having .gtoreq.2 radical sites/mol. Stirring 0.25 mol trimethylolpropane with 1.0 mol AIBN in CHCl3 contg. HCl at 2.degree.,4 bar for 48 h gave a waxy, yellow solid (I). Stirring an aq. soln. of 752.5 h NaHCO3, 990 g acrylic acid, 4 g trimethylolpropane triacrylate, and 1210 g oxidized starch (Emox D 30 S) with 2.9 g I, 0.8 g K2S2O8, and 0.4 g ascorbic acid at 4-60.degree. gave a compn. with free swell capacity 30 g/g, centrifuge retention capacity 21 g/g, and extractables 20.1%; vs. 29, 21, and 30.1, resp., with 2,2'-azobisamidinopropane.2HCl in place of I.

L11 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1998:398363 CAPLUS
DN 129:68410
TI Absorbent composition for disposable absorbent sheets
IN Qin, Jian; Wallajapet, Palani Raj Ramaswami
PA Kimberly-Clark Worldwide, Inc., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9824832	A1	19980611	WO 1997-US21426	19971125
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9854542	A1	19980629	AU 1998-54542	19971125
	AU 737681	B2	20010830		

	EP 941274	A1	19990915	EP 1997-948474	19971125
	R: BE, DE, ES, FR, GB, IT, NL, SE				
	CN 1239487	A	19991222	CN 1997-180255	19971125
	JP 2001505606	T2	20010424	JP 1998-525631	19971125
	BR 9714993	A	20011211	BR 1997-14993	19971125
PRAI	US 1996-759108	A	19961202		
	WO 1997-US21426	W	19971125		

AB An absorbent comprises either an acidic **water-swellable**, **water**-insol. **polymer** having a pKa .apprx.2-12 (such as polyacrylic acid) or a basic **water-swellable**, **water**-insol. **polymer** (such as chitosan) having a pKb .apprx.2-12 and either a basic or an acidic second material. The absorbent compn. has the ability to slowly absorb a large quantity of liq., particularly while under an external pressure. The absorbent compn. is useful in disposable absorbent products, such as diapers.

L11 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1994:136167 CAPLUS
DN 120:136167
TI Water-swellable particulate aggregates with high gel strength and absorbency, and their production
IN Johnson, Ian Michael
PA Allied Colloids Ltd., UK
SO PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9317066	A1	19930902	WO 1993-GB357	19930219
	W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
	AU 9336381	A1	19930913	AU 1993-36381	19930219
	ZA 9301195	A	19940221	ZA 1993-1195	19930219
PRAI	GB 1992-3594		19920220		
	US 1992-857502		19920325		
	WO 1993-GB357		19930219		

AB A **water-swellable absorbent** material is made by mixing particles of a polymeric material with **water** and silica or silicate agglomerating agents to form a homogeneous gel, then drying and comminuting the gel mass. The **polymers** are derived from ethylenically unsatd. monomers such as acrylic acid and acrylamide, and have pendant groups to interconnect each polymeric zone by linkages through silica or silicate. The **absorbent** products are useful in dewatering of mineral slurries or in **absorbent articles** such as diapers or sanitary napkins.

L11 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1992:532501 CAPLUS
DN 117:132501
TI Degradable polymer-based swelling agents and absorbents for use in hygienic goods and soil amendments
IN Chmelir, Miroslav; Klimmek, Helmut
PA Chemische Fabrik Stockhausen G.m.b.H., Germany
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	DE 4029592	A1	19920326	DE 1990-4029592	19900919
	DE 4029592	C2	19940714		
	EP 481225	A1	19920422	EP 1991-115707	19910917
	EP 481225	B1	19980128		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	US 5340853	A	19940823	US 1991-761075	19910917
	AT 162734	E	19980215	AT 1991-115707	19910917
	ES 2114869	T3	19980616	ES 1991-115707	19910917
PRAI	DE 1990-4029592		19900919		

AB The title products, with high absorption capacities for **water** and body fluids, are phys. mixts. of crosslinked, **water-swellable** synthetic **polymers**, galactomannans or their derivs. or **polymers**, and optionally other **polymers**, and are free-flowing powders or fibers at normal temps. An 83:17 blend of 99.3:0.7 acrylic acid-methylenebisacrylamide copolymer Na salt (I) (particle size 100-650 .mu.m) and guar gum (II) in the demand absorbency test had a max. absorption rate (1 min) for synthetic urine of 40.5 mL/g and a retention of 29.8 mL/g; vs. 50.3 and 26.9, resp., for I, and 6.1 and 4.8, resp., for II. Similar compns. showed good degradability by Xe lamps.

L11 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1987:103224 CAPLUS
DN 106:103224
TI Moisture-absorbent polymers
IN Schnee, Reiner; Masanek, Juergen; Fink, Herbert; Schleier, Waldemar; Biedermann, Gabriele
PA Roehm G.m.b.H., Fed. Rep. Ger.
SO Ger. Offen., 19 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3505920	A1	19860821	DE 1985-3505920	19850221
	FI 8600577	A	19860822	FI 1986-577	19860210
	EP 192183	A2	19860827	EP 1986-101796	19860213
	EP 192183	A3	19861008		
	R: DE, FR, GB, IT, NL, SE				
	JP 61195103	A2	19860829	JP 1986-35407	19860221
PRAI	DE 1985-3505920		19850221		

AB A lightly crosslinked, **water-swellable**, particulate **polymer** is prepd. by radical polymn. in an aq. soln. contg. >40% monomers, including monomers in salt form and crosslinking monomers. The **polymer** is useful in the prepn. of textile- or paper-based hygienic **articles** which rapidly absorb **water**, urine, etc. Thus, 100 g 80% aq. (2-methacryloyloxyethyl)trimethylammonium chloride was mixed with 0.004 g N,N'-methylenebismethacrylamide and 0.1 g EDTA tetra-Na salt, mixed with 0.012 g anthraquinonesulfonic acid and 0.0024 g benzoin, and exposed to UV light for 1-2 h to prep. an **absorbent polymer** which, after drying and milling, absorbed 52 g urine/g.

L11 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1986:136114 CAPLUS
DN 104:136114
TI Dispersed absorbent products and method of use
IN Korpman, Ralf; Gandy, Charles
PA Personal Products Co., USA
SO Eur. Pat. Appl., 27 pp.
CODEN: EPXXDW
DT Patent

LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 157960	A1	19851016	EP 1984-302059	19840327
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	ZA 8402227	A	19851127	ZA 1984-2227	19840326
	GB 2156370	A1	19851009	GB 1984-7845	19840327
	GB 2156370	B2	19871202		
	AU 567728	B2	19871203	AU 1984-26154	19840327
	AU 8426154	A1	19851003		
	JP 60212162	A2	19851024	JP 1984-66846	19840405
	JP 06073630	B4	19940921		
	BR 8401970	A	19851203	BR 1984-1970	19840426
PRAI	EP 1984-302059		19840327		

AB Particulate, **water**-insol., **water-swellable** **absorbents** dispersed in an org. liq. may be employed alone or on a substrate to provide **articles** such as pads and diapers. **Absorbents** include acrylate **polymers**, acrylate **polymer** modified polysaccharides, crosslinked CM-cellulose, crosslinked poly(alkylene oxides) and gum blends. The vehicles include oils, liq. resins, liq. rubbers, liq. polyalkylenes, glycol ethers, and higher alcs. Thus, starch polyacrylate dispersed in mineral oil was applied to a nonwoven rayon sheet. The materials were employed in the **absorbent** portion of diapers and backed with a moisture impermeable film to produce disposable diapers having superior absorptive properties and in which the particulate **absorbents** were retained in place.

L11 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1981:556624 CAPLUS
DN 95:156624
TI **Absorbent articles**
IN Dehnel, Roger Brian
PA Unilever Ltd. , UK; Unilever N. V.
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 33235	A2	19810805	EP 1981-300314	19810123
	EP 33235	A3	19811216		
	EP 33235	B1	19830511		
	R: AT, BE, CH, DE, FR, GB, IT, NL, SE				
	US 4392908	A	19830712	US 1981-223864	19810109
	ZA 8100410	A	19820825	ZA 1981-410	19810121
	JP 56118736	A2	19810917	JP 1981-8911	19810123
	JP 61033614	B4	19860802		
	ES 498795	A1	19820401	ES 1981-498795	19810123
	AT 3240	E	19830515	AT 1981-300314	19810123
PRAI	GB 1980-2624		19800125		
	EP 1981-300314		19810123		

AB The deleterious effect of the use of a plastic to bind the absorbent particles to a substrate on the wicking properties of a composite can be avoided by using an improved process in which the particles of a **water-swellable polymer** are fixed to a substrate of a **water**-absorbent material. Thus, crosslinked CM-starch [9057-06-1] particles were coated with poly(vinyl alc.) [9002-89-5] (10% by wt. of starch deriv.), and dried at 80.degree., to give particles having a urine retention value of 9.6 g/g, as compared to 10.1 g/g for uncoated particles. The dry coated particles were used to produce laminates by applying heat (160-90.degree.) to soften the

thermoplastic coating of the particles and pressing the particles and substrate.

L11 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1977:424379 CAPLUS
DN 87:24379
TI **Absorbent articles**
IN Gross, James R.
PA Dow Chemical Co., USA
SO U.S., 7 pp. Division of U.S. 3,980,663.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4017653	A	19770412	US 1975-573661	19750501
	US 3980663	A	19760914	US 1974-468794	19740509
	GB 1549994	A	19790808	GB 1976-14205	19760407
	US 4154898	A	19790515	US 1977-842713	19771017
PRAI	US 1973-371909		19730620		
	US 1974-468794		19740509		
	GB 1974-26539		19740614		
	US 1975-565880		19750407		
	US 1976-727106		19760927		

AB Water-swellable absorbent films, useful in a wide variety of applications, e.g. surgical sponges, paper towels, food packaging, etc., were prepd. from carboxylic polyelectrolytes and a crosslinking agent. Thus, a mixt. of 10g 25% aq. disodium maleate-isobutylene copolymer [55031-88-4], 0.2 g epibromohydrin [3132-64-7], 1 mL H2O, and 4 drops 2% Na lauryl sulfonate was cast into a film on Mylar, lifted from the Mylar and cured at 100.degree. for 2 h. The film gave an absorbency of 56 g/g in 0.27 N NaCl soln. (synthetic urine).

L11 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1977:30592 CAPLUS
DN 86:30592
TI Alkali metal carboxylic polyelectrolyte solutions with N-methylol crosslinker
IN Gross, James R.
PA Dow Chemical Co., USA
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3993616	A	19761123	US 1974-494692	19740805

AB Acid group-contg. **polymers** were solubilized and crosslinked by N-methylolated or N-alkylolated compds. to give insol. **water-swellable polymers** useful as sponges, inserts for diapers or sanitary napkins, and other **water-absorbent articles**. Thus, poly(acrylic acid) sodium salt [9003-04-7] was cured with 4% (based on **polymer** solids) poly(N-methylolacrylamide) [26374-25-4] 120 h at 100.degree. to give absorbency 64 g synthetic urine soln./g **polymer**.

L11 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1976:525304 CAPLUS
DN 85:125304
TI **Absorbent articles**
IN Gross, James R.
PA Dow Chemical Co., USA

SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3966679	A	19760629	US 1975-575920	19750509
	US 3980663	A	19760914	US 1974-468794	19740509
	GB 1549994	A	19790808	GB 1976-14205	19760407
	US 4154898	A	19790515	US 1977-842713	19771017
PRAI	US 1973-371909		19730620		
	US 1974-468794		19740509		
	GB 1974-26539		19740614		
	US 1975-565880		19750407		
	US 1976-727106		19760927		

AB Water-swellable **absorbent articles**, e.g. surgical sponges, diapers, tampons, meat trays, bath mats, etc., were prepd. from carboxylic polyelectrolytes by crosslinking by heating and(or) removing the H2O from the precursor compn. Thus, 14.7 g of a 22% aq. soln. of isobutene-maleic anhydride copolymer sodium salt [39612-00-5] was mixed with 0.28 g 1,3-dichloroisopropanol [96-23-1] and 10 drops of a 2% soln. of Na lauryl sulfonate (surfactant). After standing 40 min to become bubble-free, the soln. was spread on clean polyethylene sheeting with a 2.5 mil draw bar. The film sepd. from the sheeting upon drying. After drying overnight, the film was still H2O-sol. After 30 min at 60.degree., the film absorbed 64 times its own wt. of 0.27N NaCl without dissolving. After 1 hr at 100.degree., the absorbency was 25 g of 0.27N NaCl/g of film indicating the crosslinking was complete.

L11 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1976:479638 CAPLUS
DN 85:79638
TI Water-**absorbent articles**
IN Burkholder, Nelson D., Jr.
PA Dow Chemical Co., USA
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3959569	A	19760525	US 1974-494267	19740802
PRAI	US 1970-58712		19700727		

AB **Water**-absorbent cellulose fluffs or waddings useful in bandages, diapers, etc. are prepd. by distributing a dry granular powd. **water-swellable** crosslinked **polymer** on a fibrous material and steaming so that the gel surface softens and adheres firmly to the fibers. Thus, acrylamide-N,N'-methylenebisacrylamide copolymer [25034-58-6] was hydrolyzed with KOH (to .apprx.30.5%) and the gel dried, ground to a fine powder and mixed with an equal wt. of cotton linters. Steam was passed through the mixt. for 5 min. The treated mass of cotton fibers absorbed .apprx.20-30 times its wt. of **water**.

L11 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1976:136715 CAPLUS
DN 84:136715
TI **Absorbent articles** made from latexes of carboxylic synthetic polyelectrolyte containing N-substituted acrylamide crosslinking agent
IN Gross, James Richard
PA Dow Chemical Co., USA
SO U.S. Publ. Pat. Appl. B, 4 pp.

CODEN: USXXDP
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 494450	A1	19760217	US 1974-494450	19740805

AB Polyelectrolyte compns. for the manuf. of **water-swellable absorbent articles** contain acrylic **polymers** with a built in crosslinking agent, e.g. N-substituted (meth)acrylamides. Thus, a mixt.of Et acrylate, methacrylic acid, and N-isobutoxymethacrylamide was polymd. and the latex was treated with NaOH to give a viscous lightly colored soln. Enough HOAc was added to the soln. to provide pH 5 and the soln. was cast onto a chrome plate, dried, and cured 60 min at 150.degree.. The **polymer** absorbency (gel capacity) in 0.27 N NaCl was 16 (expressed as g fluid embibied per g dry **polymer**).

L11 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1974:537226 CAPLUS
DN 81:137226
TI Process for sticking a particulate polymer to a fibrous material
IN Burkholder, Nelson D., Jr.
PA Dow Chemical Co.
SO Brit., 5 pp.
CODEN: BRXXAA
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 1354406	A	19740530	GB 1971-32997	19710714
PRAI US 1970-58712		19700727		

AB **Water**- and body fluid-**absorbent articles**, with good adherence between **absorbent** and substrate and uniform dstribution of **absorbent**, suitable for use as **absorbent** pads, bandages, and facial tissues, were manuf. by contacting cellulosic fibers and dry, particulate, H2O-**swellable**, H2O-insol. chem. modified acrylamide **polymers** with steam. Thus, 1480 ml 16.2% aq. acrylamide was polymd. in the presence of 0.36 g N,N'-methylenebis(acrylamide) [110-26-9] and was .sim.30.5% hydrolyzed with KOH. The crosslinked hydrolyzed polyacrylamide [9003-05-8] was dried and ground to a fine powder which was mixed with an approx. equal wt. of cotton linters and steam was passed through the tumbled mixt. .sim.5 min. The product was dried and consisted of a mass of cotton fibers uniformly coated with adherent **polymer** particles. It absorbed 20-30 times its own wt. of **water**.

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	70.67	70.88

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-9.91	-9.91

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 20010031595 A1

L6: Entry 1 of 1 File: PGPB Oct 18, 2001

PGPUB-DOCUMENT-NUMBER: 20010031595
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010031595 A1

TITLE: Use-dependent indicator system for absorbent articles

PUBLICATION-DATE: October 18, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Anderson, Ralph L.	Marietta	GA	US	
Clark, James W.	Roswell	GA	US	
Radwanski, Fred R.	Stone Mountain	GA	US	

US-CL-CURRENT: 442/381; 428/152, 442/123, 442/414, 442/65, 442/71, 442/73, 442/75

ABSTRACT:

A use-dependent indicator system for detecting the exhaustion of an active chemical within an absorbent article is provided. The indicator system includes at least one dye component and a polymer mixture. The dye component(s) can be non-reactive and/or reactive dyes. The polymer mixture can contain a polymer, such as a latex adhesive, to facilitate control over the dissolution rate of the dye component(s). By controlling the dissolution rate of the dye component(s), an indicator system of the present invention can impart a change in color to signal the exhaustion of an active chemical incorporated within the absorbent article, such as an anti-microbial agent.

Full | Title CLS.1 SEQ.1 ATT.1

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Term	Documents
(4 AND 5 AND 2 AND 3).USPT,PGPB.	1
(L2 AND L3 AND L4 AND L5).USPT,PGPB.	1

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L8: Entry 5 of 22 File: DWPI Nov 12, 1997

DERWENT-ACC-NO: 1996-117142
DERWENT-WEEK: 200148

TITLE: Indicator material contg. volatile oily substance - such as deodorant, insecticide, moth-proofing agent, comprising impregnated nonwoven fabric with partially or wholly coloured resin layer

INVENTOR: ASHIDA, T; IKEZAWA, M

PRIORITY-DATA: 1994JP-0213384 (September 7, 1994), 1994JP-0170665 (July 22, 1994), 1994JP-0188037 (August 10, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
CN 1164893 A	November 12, 1997		000	G01N021/75
WO 9603638 A1	February 8, 1996	J	054	G01N021/75
JP 08073301 A	March 19, 1996		010	A01N025/18
JP 08106251 A	April 23, 1996		018	G09F003/02
EP 773439 A1	May 14, 1997	E	035	G01N021/75
KR 97705018 A	September 6, 1997		000	G01N021/75
US 5891811 A	April 6, 1999		000	B32B027/04

INT-CL (IPC): A01 M 29/00; A01 N 25/18; B32 B 5/24; B32 B 27/04; D04 H 3/00; G01 N 21/75; G01 N 21/78; G09 F 3/00; G09 F 3/02

ABSTRACTED-PUB-NO: US 5891811A
BASIC-ABSTRACT:

An indicator material is made from a nonwoven fabric which has a partially or wholly coloured resin layer on one side. The fabric is impregnated with an oily substance which is volatile at room temp. or on heating. The material indicates the extent of change of the resin layer from the visible state to the state hidden by the nonwoven fabric as a result of the volatilisation of the oily substance with the lapse of time when the resin layer is seen through the nonwoven fabric. The nonwoven fabric pref. contains fibres with a fineness of not more than 2 denier and has a low refractive index.

USE - The indicator material is used for fabrics treated with deodorants, aromatic materials, antimildew agents, insecticides, mothproofing agents

ADVANTAGE - The invented material clearly indicates the extent of evaporation of the oily substance as the active ingredient with the lapse of time.
ABSTRACTED-PUB-NO:

WO 9603638A EQUIVALENT-ABSTRACTS:

An indicator material is made from a nonwoven fabric which has a partially or wholly coloured resin layer on one side. The fabric is impregnated with an oily substance which is volatile at room temp. or on heating. The material indicates the extent of change of the resin layer from the visible state to the state hidden by the nonwoven fabric as a result of the volatilisation of the oily substance with the lapse of time when the resin layer is seen through the nonwoven fabric. The nonwoven fabric pref. contains fibres with a fineness of not more than 2 denier and has a low

refractive index.

USE - The indicator material is used for fabrics treated with deodorants, aromatic materials, antimildew agents, insecticides, mothproofing agents

ADVANTAGE - The invented material clearly indicates the extent of evaporation of the oily substance as the active ingredient with the lapse of time.

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Search Results - Record(s) 1 through 3 of 3 returned.

☑ 1. Document ID: US 4903254 A

L1: Entry 1 of 3 File: USPT Feb 20, 1990

US-PAT-NO: 4903254
DOCUMENT-IDENTIFIER: US 4903254 A

TITLE: Time indicator enhancement method

DATE-ISSUED: February 20, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haas; David J.	Spring Valley	NY	10977-0659	

US-CL-CURRENT: 368/327; 116/200, 968/801, 968/DIG.1

ABSTRACT:

A time indicator for use as a security badge. The badge includes a four-layer front part and a two-layer rear part. The front part has, overlying each other, a transparent front support layer with a front print display surface, an adhesive and ink display layer with a front ink display surface, an optical barrier layer; and an adhesive and ink dissolver layer. The rear part has, overlaying each other, an ink film layer and a backup member layer. Upon issue of the badge, a release sheet is peeled off the ink film layer, and the front part is overlaid and pressed down upon the rear part, with the adhesive and ink dissolver layer and the ink film layer forming an assembly joint therebetween. The time interval then begins and the ink migrates from the ink film layer, in series, through the assembly joint, the ink dissolver layer, the optical barrier layer, the adhesive and ink display layer to the front ink display surface, where it forms expiration notice words and diagonal voiding bars after expiration to the time interval.

15 Claims, 4 Drawing figures
Exemplary Claim Number: 15
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☑ 2. Document ID: US 4737463 A

L1: Entry 2 of 3 File: USPT Apr 12, 1988

US-PAT-NO: 4737463
DOCUMENT-IDENTIFIER: US 4737463 A

TITLE: Photoactivatable time-temperature indicator

DATE-ISSUED: April 12, 1988

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bhattacharjee; Himangshu R.	Randolph	NJ		
Yardley; James T.	Morristown	NJ		
Prusik; Thaddeus	Roosevelt	NJ		
Chance; Ronald R.	Morris Plains	NJ		

US-CL-CURRENT: 436/2; 116/206, 116/216, 252/408.1, 422/56, 422/58, 436/164, 436/7, 436/905

ABSTRACT:

A photoactivated time-temperature indicator is based on diacetylenic salts. A thermally unreactive ("inactive") diacetylenic salt (or a mixture of such salts) is mixed, in a polymeric matrix, with a material that generates acid upon exposure to light. Photoexcitation, preferably by UV or near UV light, causes the formation of a thermal reactive ("active") free diacetylenic acid. Following this activation step, a progressive color development occurs at a rate that increases with temperature. The indicator is useful for monitoring the freshness of perishable products, particularly those that require refrigeration.

23 Claims, 5 Drawing figures
Exemplary Claim Number: 1,17
Number of Drawing Sheets: 4

☑ 3. Document ID: US 4643122 A

L1: Entry 3 of 3 File: USPT Feb 17, 1987

US-PAT-NO: 4643122
DOCUMENT-IDENTIFIER: US 4643122 A

TITLE: Diffusion controlled security tags

DATE-ISSUED: February 17, 1987

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Seybold; Paul G.	Dayton	OH		

US-CL-CURRENT: 116/206; 252/408.1, 252/963, 436/41

ABSTRACT:

A diffusion-controlled security tag comprising a carrier containing a solution of a compound which changes color upon diffusion or evaporation of the solvent. Preferably the carrier is enveloped in a barrier film which controls the rate of diffusion/evaporation of the solvent from the carrier such that a change in the color of the carrier indicates undesirable storage or product tampering.

25 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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Term	Documents
"4903254"[USPT]	1
4903254S	0
"4643122"[USPT]	1
4643122S	0
"4737463"[USPT]	1
4737463S	0
("4903254" OR "4643122" OR "4737463")[PN].USPT.	3
((4903254 OR 4643122 OR 4737463)[PN]).USPT.	3

Display Format: REV Change Format

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Search Results - Record(s) 1 through 32 of 32 returned.

☐ 1. Document ID: US 6425979 B1

L1: Entry 1 of 32 File: USPT Jul 30, 2002

US-PAT-NO: 6425979
DOCUMENT-IDENTIFIER: US 6425979 B1

TITLE: Method for making superabsorbent containing diapers

DATE-ISSUED: July 30, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Michael R.	Seattle	WA		
Young, Sr.; Richard H.	Renton	WA		

US-CL-CURRENT: 162/173; 162/185, 162/221, 428/357, 523/204, 524/13

ABSTRACT:

A binder is applied to particles which are then combined with fibers to bind the particles to the fibers. The particles have functional sites for forming a hydrogen bond or a coordinate covalent bond. The fibers have hydrogen bonding functional sites. The binder comprises binder molecules, the binder molecules having at least one functional group that is capable of forming a hydrogen bond or a coordinate covalent bond with the particles, and at least one functional group that is capable of forming a hydrogen bond with the fibers. A substantial portion of the particles that are adhered to the fibers may be adhered in particulate form by hydrogen bonds or coordinate covalent bonds to the binder, and the binder in turn may be adhered to the fibers by hydrogen bonds. Fibers containing particles bound by this method are easily densified.

16 Claims, 15 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☑ 2. Document ID: US 6395395 B1

L1: Entry 2 of 32 File: USPT May 28, 2002

US-PAT-NO: 6395395
DOCUMENT-IDENTIFIER: US 6395395 B1

TITLE: Method and compositions for enhancing blood absorbence by superabsorbent materials

DATE-ISSUED: May 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Michael R.	Seattle	WA		
Halabisky; Donald D.	Tacoma	WA		

US-CL-CURRENT: 428/403; 428/296.1, 428/402, 428/408, 428/913, 604/365, 604/367, 604/368, 604/375

ABSTRACT:

The blood absorbence properties, e.g., free swell blood absorbence capacity and after load blood absorbence capacity of superabsorbent materials is enhanced by combining the superabsorbent materials with enhancing agents which serve to enhance the blood absorbent properties thereof. The enhancing agents can be applied to the superabsorbent materials or they can be provided on a fibrous material to be combined with the superabsorbent materials. The enhancing agents are selected from materials that include functionalities that allow them to hydrogen bond to the superabsorbent material when the enhancing agent is applied directly thereto or combined with materials to which the enhancing agents have been applied.

16 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

☐ 3. Document ID: US 6340411 B1

L1: Entry 3 of 32 File: USPT Jan 22, 2002

US-PAT-NO: 6340411
DOCUMENT-IDENTIFIER: US 6340411 B1

TITLE: Fibrous product containing densifying agent

DATE-ISSUED: January 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Michael R.	Seattle	WA		
Young, Sr.; Richard H.	Renton	WA		

US-CL-CURRENT: 162/173; 162/179, 428/497, 428/532

ABSTRACT:

A densifying agent is applied to fibers in order to improve the densification properties of the fibers. The fibers have hydrogen bonding functional groups. The densifying agent are denser than the fibers to which the densifying agent is applied. The densifying agent can be organic or inorganic. The improved densification properties are observed without the presence of particles bound to the fibers or in the presence of particles that are not bound to the fibers. Softening agents can also be applied to the fibers in order to soften the fibers and articles including such fibers. Softening agents may be selected from the group of densifying

agents.

19 Claims, 19 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 10

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☑ 4. Document ID: US 6270893 B1

L1: Entry 4 of 32 File: USPT Aug 7, 2001

US-PAT-NO: 6270893
DOCUMENT-IDENTIFIER: US 6270893 B1

TITLE: Coated fiber product with adhered super absorbent particles

DATE-ISSUED: August 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Young, Sr.; Richard H.	Puyallup	WA		
Neogi; Amar N.	Seattle	WA		
Hansen; Michael R.	Everett	WA		

US-CL-CURRENT: 428/372; 428/359, 428/373, 428/375, 428/393, 442/330, 442/333, 442/59

ABSTRACT:

A fiber product of discontinuous fibers coated with a binder containing carboxyl groups and solid particles of superabsorbent material adhered to the fibers by the carboxyl group containing binder.

14 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 5. Document ID: US 6140550 A

L1: Entry 5 of 32 File: USPT Oct 31, 2000

US-PAT-NO: 6140550
DOCUMENT-IDENTIFIER: US 6140550 A

TITLE: Water-absorbent article and method

DATE-ISSUED: October 31, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Beihoffer; Thomas W.	Arlington Heights	IL		
Tomlin; Anthony S.	Island Lake	IL		

US-CL-CURRENT: 604/366; 604/365, 604/368, 604/369, 604/370, 604/372, 604/374, 604/378

ABSTRACT:

An absorbent article including a flexible, fibrous support structure or framework in a fixed shape or configuration having particles of a superabsorbent material adhered thereto with temperature softened outer support surfaces, or with an adhesive to maintain sufficient spacing between adjacent superabsorbent particles such that liquid can more freely enter the absorbent article for contact with the superabsorbent particles.

26 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 6. Document ID: US 5849816 A

L1: Entry 6 of 32 File: USPT Dec 15, 1998

US-PAT-NO: 5849816
DOCUMENT-IDENTIFIER: US 5849816 A

TITLE: Method of making high performance superabsorbent material

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Suskind; Stuart P.	Wayne	PA		
Pearlstein; Leonard	Gladwyne	PA	19035	

US-CL-CURRENT: 523/201; 428/407, 523/202, 523/204

ABSTRACT:

A high performance absorbent particulate composition and a method of preparation in which a non-colloidal solid filler core is substantially encapsulated within a layer of hydrogel forming polymer is disclosed. Also disclosed are absorbent devices using the high performance absorbent particulate composition and methods of making these devices.

28 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☑ 7. Document ID: US 5591149 A

L1: Entry 7 of 32 File: USPT Jan 7, 1997

US-PAT-NO: 5591149
DOCUMENT-IDENTIFIER: US 5591149 A

TITLE: Absorbent article having meltblown components

DATE-ISSUED: January 7, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cree; James W.	Cincinnati	OH		
Brown; Bruce	Maineville	OH		
David; Jennifer	Urbana	IL		
Plumley; Julian A.	Satteldorf			DE
Marshall, III; Robert E. L.	Cincinnati	OH		
Cooper; John T.	West Chester	OH		

US-CL-CURRENT: 604/378; 604/368, 604/370, 604/381

ABSTRACT:

An absorbent article, such as a diaper, sanitary napkin, adult incontinent device, and the like having meltblown components is provided. The absorbent articles preferably comprises a liquid pervious thermoplastic apertured film topsheet, a liquid impervious backsheet, an absorbent core, and a fibrous acquisition web of spunlaced nonwoven fibers. The absorbent core is positioned between the topsheet and backsheet which are joined at least about a portion of the periphery of the absorbent article and the topsheet is fused to the acquisition web at discrete points of attachment. The acquisition web is positioned between the topsheet and the absorbent core.

7 Claims, 32 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 16

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 8. Document ID: US 5582644 A

L1: Entry 8 of 32 File: USPT Dec 10, 1996

US-PAT-NO: 5582644
DOCUMENT-IDENTIFIER: US 5582644 A

TITLE: Hopper blender system and method for coating fibers

DATE-ISSUED: December 10, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gaddis; Paul	Renton	WA		
Kayihan; Ferhan	Tacoma	WA		
Bernards; Jeanne	Edmonds	WA		
Hayden; David	Minneapolis	MN		
Levenspiel; Octave	Corvallis	OR		

US-CL-CURRENT: 118/303; 366/314, 366/342

ABSTRACT:

A system for coating discontinuous fibers with a liquid coating material uses a hopper/blender which entrains the fiber particles in a toroidal mass of moving fibers. The hopper/blender has an inverted conical section with an agitator assembly rotated therein. The agitator assembly has a base disc with tubular blades projecting outwardly therefrom into the conical section. Aft swept lifter blades relative to the direction of rotation are mounted to the agitator disc. A method of applying a liquid coating material to discontinuous fibers is also disclosed.

33 Claims, 14 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

☑ 9. Document ID: US 5549590 A

L1: Entry 9 of 32 File: USPT Aug 27, 1996

US-PAT-NO: 5549590
DOCUMENT-IDENTIFIER: US 5549590 A

TITLE: High performance absorbent particles and methods of preparation

DATE-ISSUED: August 27, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Suskind; Stuart	Wayne	PA		
Pearlstein; Leonard	Gladwyne	PA	19035	

US-CL-CURRENT: 604/368; 428/407, 604/358

ABSTRACT:

A high performance absorbent particulate composition and a method of preparation in which non-colloidal solid filler core is substantially encapsulated within a bounding layer of hydrogel forming polymer is disclosed. In preferred embodiments, the size of the solid filler core is about 10 to about 1500 microns contributing about 20% to about 90% by weight of the composition. The particles of the present invention provide rapid absorption of a large volume of aqueous fluids. A wide range of performance properties are achieved through selection of the filler core and the polymer.

26 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

10. Document ID: US 5539019 A

L1: Entry 10 of 32 File: USPT Jul 23, 1996

US-PAT-NO: 5539019
DOCUMENT-IDENTIFIER: US 5539019 A

TITLE: High performance absorbent particles and methods of preparation

DATE-ISSUED: July 23, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Suskind; Stuart	Wayne	PA		
Pearlstein; Leonard	Gladwyne	PA	19035	

US-CL-CURRENT: 523/201; 428/407, 523/202, 523/204

ABSTRACT:

A high performance absorbent particulate composition and a method of preparation in which non-colloidal solid filler core is substantially encapsulated within a bounding layer of hydrogel forming polymer is disclosed. In preferred embodiments, the size of the solid filler core is about 10 to about 1500 microns contributing about 20% to about 90% by weight of the composition. The particles of the present invention provide rapid absorption of a large volume of aqueous fluids. A wide range of performance properties are achieved through selection of the filler core and the polymer.

21 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

11. Document ID: US 5516585 A

L1: Entry 11 of 32 File: USPT May 14, 1996

US-PAT-NO: 5516585
DOCUMENT-IDENTIFIER: US 5516585 A

TITLE: Coated fiber product with adhered super absorbent particles

DATE-ISSUED: May 14, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Young, Sr.; Richard H.	Puyallup	WA		
Neogi; Amar N.	Seattle	WA		
Hansen; Michael R.	Everett	WA		

US-CL-CURRENT: 428/372; 428/357, 428/361, 428/373, 428/375, 428/378, 428/393, 442/330

ABSTRACT:

Discontinuous fibers are coated with a binder material with the binder material adhering the fibers to super absorbent particles. Fibers in the product are substantially unbonded except to the super absorbent particles. The binder may be present at an amount which is sufficient to substantially continuously coat the fibers. Plural coatings of various binder materials may be used. The binder material may be heat fusible or heat curable and the treated fibers mixed with other fibers for use in producing a wide variety of products.

19 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 12. Document ID: US 5498478 A

L1: Entry 12 of 32 File: USPT Mar 12, 1996

US-PAT-NO: 5498478
DOCUMENT-IDENTIFIER: US 5498478 A

TITLE: Polyethylene glycol as a binder material for fibers

DATE-ISSUED: March 12, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Michael R.	Seattle	WA		
Park; David W.	Puyallup	WA		

US-CL-CURRENT: 428/372; 428/357, 428/359, 428/375, 428/393, 442/417

ABSTRACT:

Polyethylene glycol is used as a binder material for fibers, such as wood pulp fibers, and for adhering superabsorbent particulate materials to the fibers.

29 Claims, 27 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 14

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 13. Document ID: US 5432000 A

L1: Entry 13 of 32 File: USPT Jul 11, 1995

US-PAT-NO: 5432000
DOCUMENT-IDENTIFIER: US 5432000 A

TITLE: Binder coated discontinuous fibers with adhered particulate materials

DATE-ISSUED: July 11, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Young, Sr.; Richard H.	Federal Way	WA		
Neogi; Amar N.	Seattle	WA		
Hansen; Michael R.	Seattle	WA		
Hodgson; Kevin T.	Seattle	WA		
Halabisky; Donald D.	Tacoma	WA		
Marsh; David G.	Federal Way	WA		
Brunnenkant; Christel	Seattle	WA		
Park; David W.	Puyallup	WA		
Gaddis; Paul G.	Renton	WA		
Johnston, Jr.; William C.	Puyallup	WA		

US-CL-CURRENT: 428/372; 428/357, 428/361, 428/373, 428/375, 428/378, 428/393

ABSTRACT:

A fiber product comprises dry discontinuous fibers having a starch binder on at least a portion of the fiber surfaces, at least about seventy percent of the starch binder coated fibers being unbonded to one another, solid particles are adhered to the fibers by the binder without the binder entirely coating the particles. The fibers may be air laid into a web or formed into an absorbent structure. Superabsorbent particles are a specific example of the particles which may be adhered to the fibers.

7 Claims, 27 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 14

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments

KWIC | Draw Desc | Image

☐ 14. Document ID: US 5356678 A

L1: Entry 14 of 32 File: USPT Oct 18, 1994

US-PAT-NO: 5356678
DOCUMENT-IDENTIFIER: US 5356678 A

TITLE: Pouch for absorbing fluid

DATE-ISSUED: October 18, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Heitzhaus; Kevin	Crystal Lake	IL		
Sherman; Lisa	Palatine	IL		
Hughes; John	Long Grove	IL		

US-CL-CURRENT: 428/35.6; 204/206, 428/192, 428/200, 428/201, 428/34.2, 428/34.3, 428/35.2, 428/35.7, 428/474.7, 428/76

ABSTRACT:

A pouch for absorbing liquids. On one embodiment, the ouch is formed from two distinct layers of sheet material--one including thermoplastic fibers for the purpose of heat sealing and the other a tearable tissue paper capable of tearing upon expansion of the water-absorbent material contained between the sheet material layers. In another embodiment, the pouch is manufactured to include a relatively weak sealed seam, e.g., formed by heat sealing adjacent sheet material layers together, that has a weaker bonding strength than one or more other sealed seams, such that upon expansion of the water-absorbent material, the relatively weak seam separates or delaminates into its separate layers to allow the absorbent to spread beyond the pouch at the relative weak seam. In both embodiments, the pouches contain an inner layer of water-insoluble, liquid-absorbing material, such as cross-linked sodium polyacrylate.

34 Claims, 11 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

☐ 15. Document ID: US 5328759 A

L1: Entry 15 of 32 File: USPT Jul 12, 1994

US-PAT-NO: 5328759
DOCUMENT-IDENTIFIER: US 5328759 A

TITLE: Process for making a hydraulically needled superabsorbent composite material and article thereof

DATE-ISSUED: July 12, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McCormack; Ann L.	Cumming	GA		
Radwanski; Fred R.	Roswell	GA		
Everhart; Cherie H.	Alpharetta	GA		

US-CL-CURRENT: 442/402; 156/148, 156/308.2, 28/104, 28/105, 28/117, 428/131, 428/137, 428/138, 428/219, 442/417

ABSTRACT:

Disclosed is a process of making an superabsorbent composite material which contains a hydraulically-needled fibrous web and superabsorbent materials. The method includes the steps of providing a nonwoven fibrous web; hydraulically needling the nonwoven web to enhance its liquid distribution properties; and introducing dry superabsorbent materials into intimate bonding contact with at least one surface of

the hydraulically needled fibrous web. Also disclosed is the superabsorbent nonwoven composite material made by the described process. The hydraulically needled fibrous web component of the material may contain pulp fibers, synthetic fibers, natural fibers, bicomponent fibers, continuous filaments or mixtures thereof. The superabsorbent composite material has a saturation capacity greater than about 500 percent and a wicking rate greater than about 12 centimeters per 15 minutes. The superabsorbent composite material may be used as a liquid management material in an absorbent product or absorbent structure.

27 Claims, 15 Drawing figures
Exemplary Claim Number: 1,16
Number of Drawing Sheets: 10

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 16. Document ID: US 5277963 A

L1: Entry 16 of 32 File: USPT Jan 11, 1994

US-PAT-NO: 5277963
DOCUMENT-IDENTIFIER: US 5277963 A

TITLE: Filter sheet material

DATE-ISSUED: January 11, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
von Blucher; Hasso	Erkrath			DE
de Ruiter; Ernest	Leverkusen			DE

US-CL-CURRENT: 428/206; 428/196, 428/323, 502/402, 523/205, 523/207, 526/347, 526/347.1, 604/368

ABSTRACT:

A filter material suitable for making protective clothing comprising an air-permeable pliable textile support, substantially spherical adsorber particles, and an adhesive discontinuously securing said particles to said textile support, wherein the adsorber particles comprise a copolymer based mainly on styrene and divinylbenzene, eventually crosslinked by CH.sub.2 -bridges.

7 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 17. Document ID: US 5230959 A

L1: Entry 17 of 32 File: USPT Jul 27, 1993

US-PAT-NO: 5230959
DOCUMENT-IDENTIFIER: US 5230959 A

TITLE: Coated fiber product with adhered super absorbent particles

DATE-ISSUED: July 27, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Young, Sr.; Richard H.	Puyallup	WA		
Neogi; Amar N.	Seattle	WA		
Hansen; Michael R.	Everett	WA		

US-CL-CURRENT: 428/372; 428/359, 428/361, 428/373, 428/375, 428/378, 428/393

ABSTRACT:

Discontinuous fibers are coated with a binder material with the binder material adhering the fibers to super absorbent particles. Fibers in the product are substantially unbonded except to the super absorbent particles. The binder may be present at an amount which is sufficient to substantially continuously coat the fibers. Plural coatings of various binder materials may be used. The binder material may be heat fusible or heat curable and the treated fibers mixed with other fibers for use in producing a wide variety of products.

16 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 18. Document ID: US 5188624 A

L1: Entry 18 of 32 File: USPT Feb 23, 1993

US-PAT-NO: 5188624
DOCUMENT-IDENTIFIER: US 5188624 A

TITLE: Absorbent article with superabsorbent particle containing insert pad and liquid dispersion pad

DATE-ISSUED: February 23, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Young, Sr.; Richard H.	Puyallup	WA		
Hansen; Michael R.	Everett	WA		
Lancaster; E. Peter	Gig Harbor	WA		
Mehta;Haresh R.	Federal Way	WA		
Brunnenkant; Christel	Seattle	WA		

US-CL-CURRENT: 604/378; 604/358, 604/366, 604/368

ABSTRACT:

A composite absorbent article is described having a plural layer absorbent core comprising a bonded insert pad and a dispersion pad. The insert pad preferably comprises binder coated fibers to which superabsorbent particles are adhered. By using heat fusible binders, a heat bonded superabsorbent containing insert pad is

provided. The dispersion pad also typically comprises fibers and enhances the wicking of liquid throughout the insert pad. In addition, the insert pad may be bound to the dispersion pad at the interface between the pads to provide a stronger composite structure and to also entangle the fibers of the two pads at their interface to improve the wicking of liquid from the dispersion pad into the insert pad. In addition, hydrophilic fibers may be included in the insert pad to enhance the wicking of liquid into the insert pad. The use of surfactant materials in the binder enhances the vertical wicking characteristics of the composite pad. In addition, densification of the dispersion pad, within limits, also enhances the rewet characteristics of the article. In a disposable diaper construction, the insert pad is preferably positioned underneath the facing sheet of the diaper with the dispersion pad being positioned between the insert pad and the backing sheet of the diaper.

33 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 19. Document ID: US 5124197 A

L1: Entry 19 of 32 File: USPT Jun 23, 1992

US-PAT-NO: 5124197
DOCUMENT-IDENTIFIER: US 5124197 A

TITLE: Inflated cellulose fiber web possessing improved vertical wicking properties

DATE-ISSUED: June 23, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bernardin; Leo J.	Appleton	WI		
Rhode; Patti J.	Rosendale	WI		
Heimbach; Catherine J.	Stockbridge	WI		

US-CL-CURRENT: 442/35; 428/393, 428/398, 428/913, 442/338, 604/367, 604/368, 604/374, 604/378

ABSTRACT:

An absorbent web formed from inflated cellulose fibers said webs possessing improved vertical wicking properties compared to a similar web of cellulose fibers. The webs have been found to be particularly well suited for use in forming absorbent products such as diapers and the like. In one aspect of the present invention, the inflated cellulose fibers are generally free of a surface finish. In a second aspect the inflated cellulose fibers are crosslinked.

32 Claims, 16 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 16

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 20. Document ID: US 5071675 A

L1: Entry 20 of 32 File: USPT Dec 10, 1991

US-PAT-NO: 5071675
DOCUMENT-IDENTIFIER: US 5071675 A

TITLE: Method of applying liquid sizing of alkyl ketene dimer in ethanol to cellulose fibers entrained in a gas stream

DATE-ISSUED: December 10, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gupta; Maharaj K.	Renton	WA		
Neogi; Amar N.	Seattle	WA		
Young, Sr.; Richard H.	Puyallup	WA		

US-CL-CURRENT: 427/213; 162/169, 162/185

ABSTRACT:

Cellulose fibers are entrained in a gaseous medium and sized while entrained with a sizing material. The sizing material may comprise a nonaqueous solution of alkyl ketene dimer or other sizing material. Also, immersions of fibers in such a nonaqueous sizing solution is another approach for sizing fibers.

8 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 21. Document ID: US 5064689 A

L1: Entry 21 of 32 File: USPT Nov 12, 1991

US-PAT-NO: 5064689
DOCUMENT-IDENTIFIER: US 5064689 A

TITLE: Method of treating discontinuous fibers

DATE-ISSUED: November 12, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Young, Sr.; Richard H.	Puyallup	WA		
Neogi; Amar N.	Seattle	WA		
Brunnenkant; Christel	Seattle	WA		
Lincoln; James F. L.	Kent	WA		
Hansen; Michael R.	Everett	WA		

US-CL-CURRENT: 427/202; 156/62.2, 264/121, 264/122, 264/123, 425/83.1

ABSTRACT:

Discontinuous fibers are entrained in a gaseous medium and coated while entrained with a substantially continuous coating of a binder material. Plural coatings of various binder materials may be applied to the entrained fibers. Also, one or more solid particulate materials may be adhered to the fibers by the binder material as the binder material dries. The binder material may be heat bondable and mixed with other fibers for use in producing a wide variety of products.

25 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 22. Document ID: US 5057166 A

L1: Entry 22 of 32 File: USPT Oct 15, 1991

US-PAT-NO: 5057166
DOCUMENT-IDENTIFIER: US 5057166 A

TITLE: Method of treating discontinuous fibers

DATE-ISSUED: October 15, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Young, Sr.; Richard H.	Puyallup	WA		
Neogi; Amar N.	Seattle	WA		
Brunnenkant; Christel	Seattle	WA		
Lincoln; James F. L.	Kent	WA		
Hansen; Michael R.	Everett	WA		

US-CL-CURRENT: 156/62.2; 156/166, 156/181, 156/62.6, 19/305, 264/121, 425/80.1

ABSTRACT:

Discontinuous fibers are entrained in a gaseous medium and coated while entrained with a substantially continuous coating of a binder material. Plural coatings of various binder materials may be applied to the entrained fibers. Also, one or more solid particulate materials may be adhered to the fibers by the binder material as the binder material dries. The binder material may be heat bondable and mixed with other fibers for use in producing a wide variety of products.

41 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 23. Document ID: US 4882204 A

L1: Entry 23 of 32 File: USPT Nov 21, 1989

US-PAT-NO: 4882204
DOCUMENT-IDENTIFIER: US 4882204 A

TITLE: Diaper spray

DATE-ISSUED: November 21, 1989

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tenenbaum; Harvey	Maple, Ontario			CA

US-CL-CURRENT: 427/180; 118/308, 427/421, 604/367

ABSTRACT:

The absorbency of a disposable diaper is increased by spraying the diaper with an aerosol spray containing absorbent powder, e.g. talcum, cornstarch or both. The powder particles are so fine (20-40 micron diameter) that the spray force drives many of them into the subsurface layers of the diaper, thus increasing the absorbency of the diaper. At the same time, some powder remains on the diaper surface to help protect the skin of the wearer in the absence of urine.

6 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 24. Document ID: US 4875520 A

L1: Entry 24 of 32 File: USPT Oct 24, 1989

US-PAT-NO: 4875520
DOCUMENT-IDENTIFIER: US 4875520 A

TITLE: Desiccant heat device

DATE-ISSUED: October 24, 1989

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Steele; Donald F.	Cohasset	MA		
Hoagland; Lawrence C.	Center Harbor	NH		
Kyricos; Christopher	Cohasset	MA		
Tolan; Peter	Scituate	MA		

US-CL-CURRENT: 96/150; 165/10

ABSTRACT:

A rotary regenerative heat wheel having a heat exchange matrix comprised of a spirally wound strip of plastic having a coating of dry desiccant affixed thereto. The quantity of desiccant affixed to the strip is selected so that the sensible and latent heat transfer efficiencies of the wheel are relatively high and approximately equal. An apparatus and method are disclosed for applying a desiccant coating to a sheet of plastic.

17 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 25. Document ID: US 4778458 A

L1: Entry 25 of 32 File: USPT Oct 18, 1988

US-PAT-NO: 4778458
DOCUMENT-IDENTIFIER: US 4778458 A

TITLE: Disposable sanitary absorbent incontinence pad

DATE-ISSUED: October 18, 1988

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gronostajski; David E.	Trenton	NJ		

US-CL-CURRENT: 604/366; 427/394

ABSTRACT:

A coverstock for disposable sanitary absorbent products is described. It comprises a non-woven web having a body-contacting surface and a material-contacting surface. The web is partially impregnated in selected areas with a fluid-repellent material such as a hot-melt adhesive. The penetration of the repellent material extends from the material-contacting surface, a distance toward the body-contacting surface at least 5% and not more than 95% of the thickness of the web so that the body-contacting surface is free of fluid-repellent material, and so that the material-contacting surface can be secured to the material by application of heat and without any additional adhesive material. A disposable absorbent pad made with the coverstock material, and the process for making the coverstock material and the pad are also disclosed.

6 Claims, 12 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 26. Document ID: US 4718898 A

L1: Entry 26 of 32 File: USPT Jan 12, 1988

US-PAT-NO: 4718898
DOCUMENT-IDENTIFIER: US 4718898 A

TITLE: Hot melt adhesive waste barrier

DATE-ISSUED: January 12, 1988

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Puletti; Paul P.	Glen Gardner	NJ		
Decowski, Jr.; Stanley J.	Glen Gardner	NJ		

US-CL-CURRENT: 604/366

ABSTRACT:

Leakage resistant waste barriers for use on absorbent articles are prepared by coating a portion of a nonwoven sheet with a water insoluble or water impermeable hot melt adhesive composition.

3 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 27. Document ID: US 4692161 A

L1: Entry 27 of 32 File: USPT Sep 8, 1987

US-PAT-NO: 4692161
DOCUMENT-IDENTIFIER: US 4692161 A

TITLE: Hot melt adhesive waste barrier

DATE-ISSUED: September 8, 1987

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Puletti; Paul P.	Glen Gardner	NJ		
Decowski, Jr.; Stanley J.	Glen Gardner	NJ		

US-CL-CURRENT: 604/366; 604/370

ABSTRACT:

Leakage resistant waste barriers for use on absorbent articles are prepared by coating a portion of a nonwoven sheet with a water insoluble or water impermeable hot melt adhesive composition.

2 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 28. Document ID: US 4627847 A

L1: Entry 28 of 32 File: USPT Dec 9, 1986

US-PAT-NO: 4627847
DOCUMENT-IDENTIFIER: US 4627847 A

TITLE: Hot melt adhesive waste barrier

DATE-ISSUED: December 9, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Puletti; Paul P.	Glen Gardner	NJ		
Decowski, Jr.; Stanley J.	Glen Gardner	NJ		

US-CL-CURRENT: 604/366; 604/370

ABSTRACT:

Leakage resistant waste barriers for use on absorbent articles are prepared by coating a portion of a nonwoven sheet with a water insoluble or water impermeable hot melt adhesive composition.

1 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 29. Document ID: US 4600458 A

L1: Entry 29 of 32 File: USPT Jul 15, 1986

US-PAT-NO: 4600458
DOCUMENT-IDENTIFIER: US 4600458 A

TITLE: Method of making an absorbent laminate structure

DATE-ISSUED: July 15, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kramer; Timothy A.	Cincinnati	OH		
Young; Gerald A.	Springfield Township, Clark County	OH		
Kock; Ronald W.	Wyoming	OH		

US-CL-CURRENT: 156/199; 156/276, 156/290, 156/459, 156/553, 427/180, 604/368

ABSTRACT:

The present invention provides a layered absorbent structure, the structure having an upper surface and a lower surface. The structure comprises:

(a) n webs of fibrous material, n being an integer of two or more. The webs are layered such that there is an uppermost web, a lowermost web, n-2 intermediate webs, and n-1 interfaces of two opposed adjacent contacting surfaces of adjacent webs. Each of the interfaces has a surface area.

(b) Absorbent particles forming a discontinuous layer at one or more of the interfaces.

The opposed adjacent contacting surfaces at each interface where particles are present are substantially entirely frangibly bonded by fiber entanglement between the contacting surfaces. The particles are immobilized at said interface(s) substantially entirely by fiber entrapment.

22 Claims, 14 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☑ 30. Document ID: US 4578068 A

L1: Entry 30 of 32 File: USPT Mar 25, 1986

US-PAT-NO: 4578068
DOCUMENT-IDENTIFIER: US 4578068 A

TITLE: Absorbent laminate structure

DATE-ISSUED: March 25, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kramer; Timothy A.	Cincinnati	OH		
Young; Gerald A.	Springfield Township, Hamilton County	OH		
Kock; Ronald W.	Wyoming	OH		

US-CL-CURRENT: 604/368; 428/152, 428/153, 428/154, 428/195, 428/198, 428/206, 428/211, 428/219, 428/340, 428/402, 428/913

ABSTRACT:

The present invention provides a layered absorbent structure, the structure having an upper surface and a lower surface. The structure comprises:

(a) n webs of fibrous material, n being an integer of two or more. The webs are layered such that there is an uppermost web, a lowermost web, n-2 intermediate webs, and n-1 interfaces of two opposed adjacent contacting surfaces of adjacent webs. Each of the interfaces has a surface area.

(b) Absorbent particles forming a discontinuous layer at one or more of the interfaces.

The opposed adjacent contacting surfaces at each interface where particles are present are substantially entirely frangibly bonded by fiber entanglement between the contacting surfaces. The particles are immobilized at said interface(s) substantially entirely by fiber entrapment.

32 Claims, 14 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☐ 31. Document ID: US 4568813 A

L1: Entry 31 of 32 File: USPT Feb 4, 1986

US-PAT-NO: 4568813
DOCUMENT-IDENTIFIER: US 4568813 A

TITLE: Electrode for arc welding and method for underwater welding

DATE-ISSUED: February 4, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Andersen; Leonard M.	Yonkers	NY	10704	

US-CL-CURRENT: 219/72; 149/37, 219/145.1, 219/146.1

ABSTRACT:

An electrode comprising a base rod and a hard coating is coated with a powder coating comprising thermite, a gelling agent, and optionally particles of hard coating material that swells upon contact with water and forms a gelatinous coating upon use in underwater arc welding, and acts as an insulating, coating, and fluxing agent in underwater arc welding is disclosed.

16 Claims, 2 Drawing figures
Exemplary Claim Number: 15
Number of Drawing Sheets: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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TITLE: Process for making absorbent articles

DATE-ISSUED: July 12, 1983

INVENTOR-INFORMATION:

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ABSTRACT:

The invention concerns a process for manufacturing a water-absorbent article in which particles of a water-swellable polymer are fixed to a water-absorbent substrate. The process includes the steps of forming on the surface of the water-swellable particles a coating of a thermoplastic adhesive resin; locating the coated particles in their unswollen and dry state on or within the water-absorbent

substrate also in the dry state; and applying heat to soften the thermoplastic coating of the particles and pressing the particles and substrate to cause the particles to be bound to the substrate.

5 Claims, 0 Drawing figures
Exemplary Claim Number: 1

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